

The Façade Pattern



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Motivation



Access a database

Get employee records

Ask DBA which database to use

Import the right Python modules

Instantiate a control object

Build a connection string

Connect to the database

Run a query and process the results

Close the connection



Demo



Retrieve and print employee records

Use free AdventureWorks database



Façade

Classification: Structural

Unified interface to a set of interfaces

Higher-level interface

Makes the set of interfaces easier to use

Reduces complexity

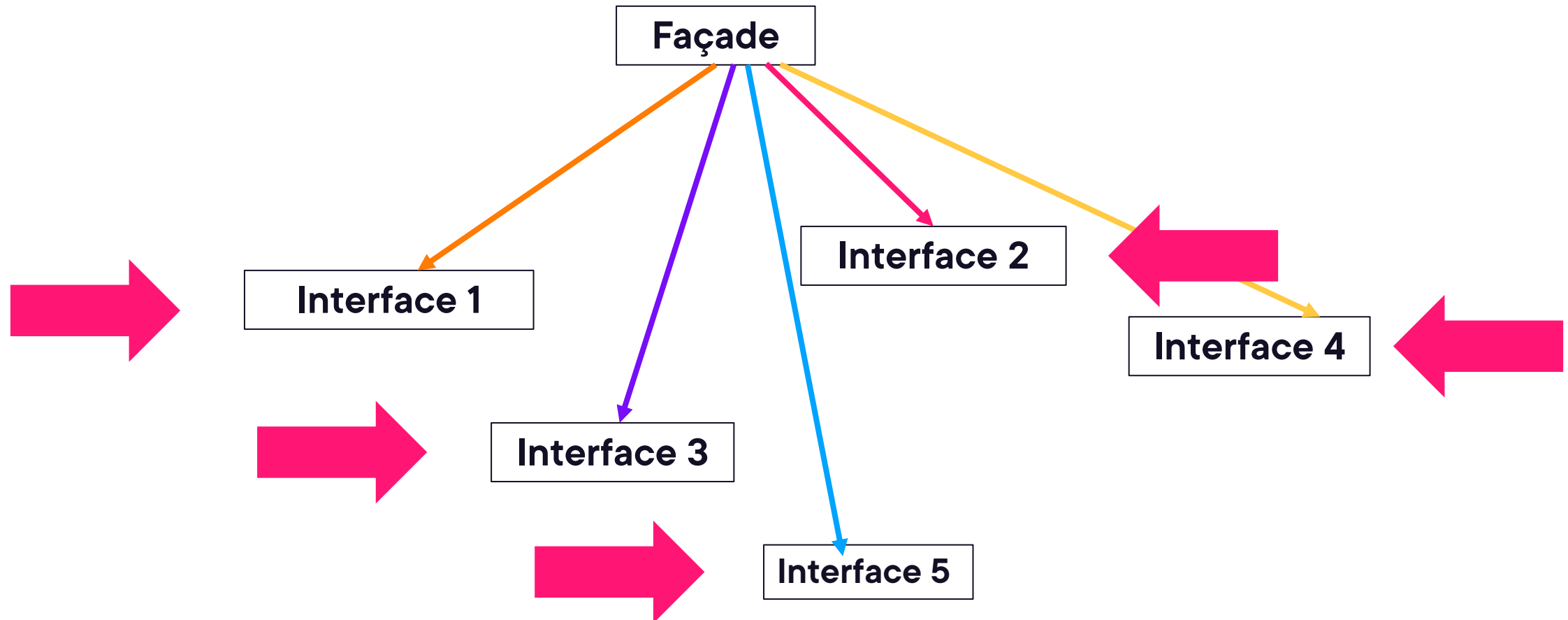
Example has five interfaces:

- connect, cursor, execute, commit and close

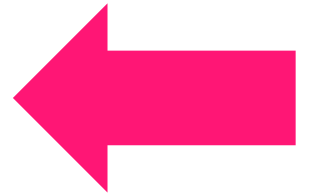
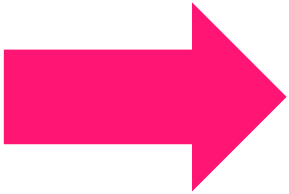
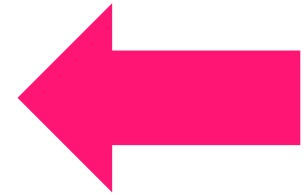
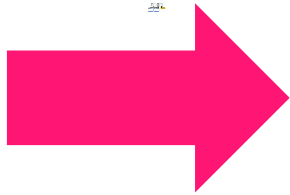
Implementing façade will result in just one



Façade Structure



Façade Structure



Demo



Implementing Façade



Summary



Shields clients from subsystem details

Reduces the objects to handle

Promotes weak coupling

Vary the subsystem

No change to client code

Clients can still use subsystems directly

